

REMARKS

Reconsideration and withdrawal of the rejections of the application are respectfully requested in view of the foregoing amendments and following remarks.

I. STATUS OF THE CLAIMS AND FORMAL MATTERS.

Claims 1-15 are pending in this application. Claims 7 and 9-15 have been withdrawn from consideration. Claims 1, 6 and 21 have been amended in this response. No new matter has been introduced.

It is submitted that the claims are patentably distinct over the prior art cited in the Office Action, and that these claims are in full compliance with the requirements of 35 U.S.C. § 112. The amendment of the claims, as presented herein, are not made for purposes of patentability within the meaning of 35 U.S.C. §§§§ 101, 102, 103 or 112. Rather, these amendments and additions are made simply for clarification and to round out the scope of protection to which Applicants are entitled.

II. REJECTIONS UNDER 35 U.S.C. §§102 & 103

Claims 1-6, 8 and 16-23 were rejected under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent No. 3,368,933 to Wicker (hereinafter, merely "Wicker").

Instant claim 1 recites, *inter alia*:

"...a polymeric resin coating applied on said outside surface of said base structure; and a plurality of grooves formed in said polymeric resin coating;
wherein said plurality of grooves aid in improved paper board release and increased rate of board moisture removal."
(Emphasis added)

Wicker relates to a belt for use in a corrugator combiner machine. Wicker, however, teaches the use of a sheet 136 of Mylar polyester film to form a belt 137. The assembled structure is held in place by a suitable adhesive 138. *Wicker*, col. 10, lines 27-35.

According to the instant invention, the polymeric resin coating is applied on the outside surface of the base substrate, as recited in the currently amended claims. This means, the instant coating inherently adheres to the substrate without any use of additional adhesives as suggested in Wicker. That is because the coating according to the instant invention is a liquid polymer resin coating in its real sense and not a separate Mylar as suggested in Wicker.

Therefore, Mylar in its real form is a thin polyester film, which is not comparable to the polymeric resin coating of the instant invention because it is a liquid resin coating that is being used in the instant invention, and not merely a thin sheet that is attached to the substrate using an adhesive. At several locations in the specification it has been specified that this coating can also be impregnated into the base substrate using pressure and force. *Instant Application*, paragraphs [0036], [0057], [0059] etc.

Therefore Applicants respectfully submit that Wicker does not teach all the elements of the instant invention. Applicants thus submit that claim 1 is patentable over the relied upon portions of Wicker and therefore should be allowed.

Claims 1-6, 8 and 16-23 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 5,857,605 to Welch et al. (hereinafter, merely “Welch”) in view of Wicker.

As understood by the Applicants, Welch relates to a double backer belt for curing the web bonding adhesive and drying the corrugated paperboard web. Welch specifically teaches the use of fabric “plies 119-121” and a “rubber cover 122” applied on top of these plies.

Applicants respectfully submit that nowhere in its disclosure does Welch teach or suggest

applying a polymer resin “coating” on the outside of its belt. Similar to Wicker, Welch does not teach or suggest this feature of claim 1 as discussed above. Additionally, Wicker does not teach or suggest the use of “woven” fabrics with yarns in CD and MD. Although the Examiner argues that this feature would be obvious to one skilled in the art in view of Wicker, the use of plies teaches away from the instant invention, because they do not increase rate of board moisture removal, as recited in the instant claims.

This feature is not merely a structural limitation, but a basic feature essential in a single-facer belt for proper functioning, without which the belt is rendered useless. Applicants submit that the use of multiple fabric plies in Welch obstructs the hot, moisture laden air from entering the structure and therefore does not allow the carriage of the moisture laden air to escape to the atmosphere when outside the nip. Again, it should be understood that the outside surface of the instant belt is multifunctional in that it optimizes moisture venting and removal and provides for smooth sheet release after the nip (*Instant application*, paragraph 0061). Therefore, Applicants submit that Welch does not provide for the deficiencies of Wicker, and thus, the combination of Welch and Wicker as a matter of fact fails to teach or suggest all the limitations of claim 1. Thus, claim 1 is patentable over the relied upon portions of Welch and Wicker, considered either alone or in combination.

Claims 1-6 and 8 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 6,470,944 to Billings et al. (hereinafter, merely “Billings”) in view of U.S. Patent No. 6,428,874 to McGahern et al. (hereinafter, merely “McGahern”) and further in view of US 2002/0102894 to Hansen (hereinafter, merely “Hansen”).

Billings is directed to an unlaminated belt for a single-facer section of a corrugated board production line having a single base structure in the form of an endless loop. Applicants submit

that Billings does not teach or suggest the above identified features of claim 1. Specifically, Applicants submit Billings does not teach or suggest a polymeric resin coating applied on the board contact surface of the base structure; and a plurality of grooves formed in the polymeric resin coating. The fabric according to Billings is not grooved or holed on its board contact surface. The instant invention is actually, an improvement thereon (See ¶ 0014, 0035-0037 and 0060-0061 of the specification).

Additionally, there is nothing in Hansen either to indicate that his yarn would be the sheet contacting surface of a corrugator belt. Rather they are meant to be reinforcing structures for belts such as corrugator belts. *Hansen*, paragraph 15. Accordingly, there is no teaching in Hansen for using such yarns, grooved or perforated, in a corrugator belt. Applicants submit that this feature is not merely a structural limitation, but a basic feature essential in a single-facer belt for proper functioning, without which the corrugator belt is rendered useless.

As to McGahern, it involves primary and secondary grooves, but in a process belt. McGahern, specifically, relates to a resin-impregnated endless belt for a long nip press or calendar of the shoe type. It is directed to a shoe press belt with a grooved surface, which is to provide spaces to separate the liquid phase moisture that is pressed from a sheet/press fabric. The instant invention, on the contrary, relates to a single facer corrugator belt in combination with a corrugator machine that is specifically designed to allow moisture vapor that comes from the heated board to pass out of the facer zone and into the belt. There is no motivation for a skilled worker in the corrugator belt art to look into paper making belts to solve the problem addressed by the present invention.

Therefore, Applicants submit that none of the three references teach grooves being formed in the polymeric resin coating applied to one surface of the base structure of a corrugator belt, as recited in the instant claims.

For at least the foregoing reasons, Applicants respectfully request the withdrawal of the rejection and submit that independent claim 1 is patentable.

III. OBVIOUSNESS-TYPE DOUBLE PATENTING REJECTION

Claims 1-6 and 8 were rejected under the judicially-created doctrine of obviousness-type double patenting as allegedly being unpatentable over claim 1-19 of Billings in view of McGahern and further in view of Hansen.

For at least the reasons discussed above, Applicants request reconsideration and withdrawal of the provisional obviousness-type double patenting rejection.

IV. DEPENDENT CLAIMS

The other claims are dependent from one of the independent claims, discussed above, and are therefore believed patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

CONCLUSION


In view of the foregoing amendments and remarks, it is believed that all of the claims in this application are patentable and Applicants respectfully requests early passage to issue of the present application.

In the event the Examiner disagrees with any of statements appearing above with respect to the disclosure in the cited reference or references, it is respectfully requested that the Examiner specifically indicate those portions of the reference or references, providing the basis for a contrary view.

Please charge any additional fees that may be needed, and credit any overpayment, to our Deposit Account No. 50-0320.

Respectfully submitted,
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